

The impact of CRM Dimensions on Call Center Performance

Aliyu Olayemi Abdullateef¹, Sany Sanuri Mohd Mokhtar², and Rushami Zien Yusoff³

College of Business, University Utara Malaysia

Summary

This research aims at developing a conceptual framework and valid prepositions on the impacts of Customer Relationship Management (CRM) dimensions on call center performance. The researchers primarily used qualitative approach that involves initial qualitative interview and detailed literature reviews of academic literatures and industry reports on CRM and customer contact centers. Evidence from the extant literatures and the call center managers interviewed suggested that there exist positive relationship between CRM dimensions, perceived service quality, inbound first call resolution and caller satisfaction. Based on these findings, this study proposed a conceptual framework through which the impact of CRM on inbound call center performance can be measured. Given that this paper is based on qualitative approach, there is need to embark on empirical data gathering to validate the conceptual model presented. Very important in this research is that it avails academics the knowledge of the theoretical linkages that exist between CRM dimensions and inbound call center operations. It equally provides opportunity to the contact center management on the benefits that are inherent in measuring the impact of CRM dimensions on perceived service quality, inbound first call resolution and caller satisfaction.

Keywords

CRM, contact centers, call centers, perceived service quality, first call resolution, inbound, caller satisfaction.

Introduction

The current global competitions threatened by the financial crisis has confirmed the need for both manufacturers and service marketers to monitor how their customers feel about their goods and services, and particularly when there is enormous evidence in support of relationship marketing as the alternative means of solving the global market fluctuations (Aihie, 2007; Gummesson, 2004; Berry, 1995). This concept of relationship interfaces is centered on where and how individuals and organizations exchange information whether internally as well as externally (Berry, 1983). It empirically means an organization's ability of getting in touch with both the internal and external customers in responsive and flexible manners (Abdullateef et al., 2010).

Efforts in understanding how managers could effectively establish and maintain long term positive relationships with their customers have led this current study into understanding the term "customer relationship management (CRM)". CRM has been argued to enable

companies to successfully interact with their customers in a dynamic and profitable manner (Yueh et al., 2010; Aihie and Bennani, 2007; Adam and Michael, 2005; Gummesson, 2004; Sin et al, 2005). CRM was also defined by Nguyen et al (2007) as information system that allows organizations to track customers' interactions with their firms and allows employees to instantly pull up information about the customers such as past sales, service records, outstanding records and unresolved problem calls. CRM is said to offer a long term changes and benefits to businesses that chose to adopt it (McNally, 2007). However, many scholars still debate over what should exactly constitute CRM; some says CRM are nothing more than mere software, while others says it is a modern means of satisfying customers' requirement at profit (Yueh et al., 2010; Soon 2007; Nguyen et al, 2007; and Eric et al, 2006). While different researchers believed that there is no one correct definition of CRM, this research would like to define CRM as "Organization's ability to efficiently integrate people, process, and technology in maximizing positive relationships with both current and potential customers.

CRM as referred is a concept that derives its popularity since 1990s, specifically from two main underlying theories i.e. relationship marketing theory and resource based theory. Several authors have opined that resource based theory categorizes resources as those elements that are controlled by an organization in order to formulate and implement necessary strategies that would assist in its operational efficiencies (Meso & Smith 2000; Grant, 1996; Mahoney & Pandian 1992; Barney, 1991; and Wernerfelt 1984). Relationship Marketing in customer contact center empirically aligned with the two schools of thought upon which Resource Based Theory is built, "Resource Based View (RBV)" and "Knowledge Based View (KBV)", which have both emphasized on the benefits inherent in organizations competitive advantages (Coltman, 2007, and Acedo et al, 2006). In view of this, this research argued that the available resources in call centers and the existing systems that support its current service delivery processes should also be considered as part of the important structures in contact centers. In this study, we have presented our theoretical framework based on the arguments from resource-based approach, by introducing relevant concepts from resource-based theory.

Importantly, how call center managers have been effectively utilizing and maximizing their labor and technology resources within the customer contact center industry.

Overview of the CRM Contact Centers

For better understanding of CRM applications in the contact center industry upon which a detailed conceptual framework such as this could be developed, this research has conducted an initial study to investigate the concepts of CRM applications in the CRM customer contact center industry. 16 Executives of selected firms from four sectors (Telecommunications-equipments, Telecommunications-networks, Transportation, and Financial services) were interviewed with the aim of determining the implementations and outcomes of CRM projects within these sectors of the contact center industry as a strategic part of customer relationship marketing. This interview availed the researchers the opportunity of knowing the practical benefits of CRM specifically within the inbound call centers. In any CRM call centers, either inbound or outbound both the customers and the firms can effectively communicate via a multiple channels such as: call, faxes, live chat, and e-mails. This is because a contact center is generally a part of an organization's overall customer relationship management (Soon, 2007; Sin et al., 2005; Yim et al., 2005).

Among the good motivating factors of CRM concept is the complex market competitions which have led many organizations into focusing on how best to maximize customer's interaction in order to improve service quality, customer satisfaction and cost of operation (McNally, 2007; Nguyen et al, 2007). The fact of this matter is that currently there are substantial evidences that the contact centers are now the preferred and most prevalent means through which many companies now acquires, retain and maintain long term relationship with both their current and potential customers (Dean, 2009; Levin, 2007a; Timothy et al., 2006). Good examples are the Fortune 500 companies that are estimated to be operating on average 30 different call centers each (SQM, 2005). Thus, the call center industry is said to be vast and currently rapidly expanding in terms of both workforces and its economic scope. For example, industry report have estimated that not less than 70% of all the customer business interactions are now occurring via call centers and that at least \$700 billion worth in goods and services were sold via the call centers and contact centers in 1997 (SQM, 2005). What is important is that recognized industry reports have established that these figures have since been expanding at 20% annually (Callcentre.net, 2008; SQM, 2005). It was equally established that over three percent of the United

States' working population are currently employed in call centers/contact centers.

Theoretical Background and Conceptual Framework

Sequel to the observed practical gaps within the contact center industry, academic literatures such as Dean (2008; 2004), McNally (2007), Roland and Werner (2005), Feinberg et al (2002; 2000) have all empirically argued in favor of the industry reports by SQM (2005) and Callcentre.net (2008; 2003) that criticized most of the organizations operating contact centers as too focusing on things that are easy to measure (e.g. service level, average talk time, average after call work time, average handling time, call per period, average abandonment rate, average speed of answer, average time in queue, percentage of calls blocked, adherence to schedule, employee turnover rate) instead of what is important to measure (e.g. perceived service quality, first call resolution, caller satisfaction, employee job satisfaction etc.) and for focusing on the quantity of calls instead of the quality of such calls (Bhimrao and Janardan., 2008; Soon, 2007; Roland and Werner., 2005; Dean, 2004; Feinberg et al., 2002).

Other empirical evidences from the extant literatures have indicated that for a call center service to be efficient, it should consist of CRM dimensions, first call resolution, perceived service quality and inbound caller satisfaction (Yueh et al., 2010; Levin, 2007a&b; Dean, 2007; Roland and Werner, 2005; Sin et al., 2005; SQM, 2005; Callcentre.net, 2003; Feinberg et al., 2000). CRM dimensions (customer orientation, CRM organization, knowledge management and technology based CRM) as conceptualized, have been argued to be positively related to call center operational efficiencies such as perceived service quality, first call resolution and caller satisfaction as could be seen in figure 1 below (Sin et al., 2005; Yim et al., 2005).

The above issues have been identified as the primary cause of the current high attrition rates, customer dissatisfactions and subsequent high cost of operating contact centers (Dean, 2007; Lee et al., 2006; Wang, 2006; Roland and Werner, 2005). As suggested by Feinberg et al. (2000) that uncovering the significant variables that influences caller satisfactions are very crucial if researchers are to provide necessary guidance for the contact center managers. From the aforementioned practical issues and theoretical gaps, the objectives of this study is to conceptualize and propose a model that will explain the relationships that exist between CRM dimensions and its consequences on first call resolution,

perceived service quality, and caller satisfaction and equally propose the mediating impact of perceived service quality and first call resolution on caller satisfaction within the customer contact center industry. Below is figure 1 that aptly depicts the impact of CRM dimensions on caller satisfaction within the contact center industry:

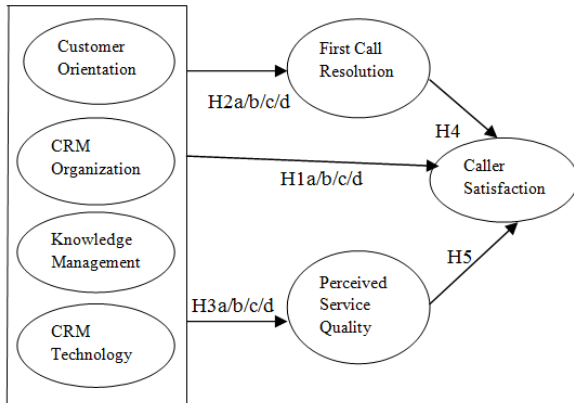


Figure 1: Conceptual Model of the Impacts of CRM Dimensions in Contact Centers

Customer Orientation

Most literatures have used terms such as marketing concepts; market orientation, customer orientation, market driven firms, or market focused organizations to describe the types of an organizational orientation where the customer needs serves as basis upon which organizations plans and designs its strategies (Yueh et al., 2010; Dean, 2007; Lukas and Ferrell, 2000; Narver and Slater, 1990). Over the last twenty years these concepts have started to be very critical in the field of marketing management practices and theories, with apparent conclusions in support of the statement that any organization that adopts customer orientation approach are more likely to establish the required customer quality, increase customer satisfaction and achieved the desired organizational objectives more efficiently than its competitors (Yueh et al., 2010; Roland and Werner, 2005; Narver and Slater, 1990).

Beyond this are the different ways by which different authors have explained the meaning of customer orientation, with specific reference to Kohli et al (1993) that argued that customer orientation serves as one of the behavioral components in a typical market orientation programs. Other components includes competitor orientation and inter-functional coordination, which were said to be interlocking in between two decision making procedures of long term customer focus and

organization's profitability (Kohli et al, 1993). In addition to this are the arguments of some academics and marketing practitioners that there have been no established clear distinctions between market orientation and customer orientation (Jaworski and Kohli, 1990). The apparent conclusion is that both terms have been interchangeably used (Lukas and Ferrell, 2000; Kohli et al., 1993; Jaworski and Kohli, 1990; Narver and Slater, 1990). In this conceptual framework, customer orientation incorporates both commitment to customer's needs and customer feedback as supported by many extant literatures (Dean 2007, 2002).

At the other extreme end are some authors that argued that despite the importance of the concept of customer orientation, there still exist very little literatures that are dealing with process of developing such an orientation within the contact center industry (McNally, 2007; Dean, 2005; Roland and Werner, 2005), specifically whether through a general descriptions or via a case study approach (Sin et al., 2005; Yim et al., 2005). To Sin et al (2005), they argued that although it is observed that most empirical studies have been concentrating on the degree and measurements of the concepts, but the extant literatures have long neglected the variations in the customer orientation dimensions or the features of the concepts as exhibited by each organizations (Yueh et al., 2010; Sin et al., 2005). Therefore the general literatures on customer orientation could be argued as not been widely practiced specifically by the contact center professionals in the manner advocated by Sin et al (2005) and supported in other literatures such as Roland and Werner (2005) and Dean (2007) that have all suggested a positively relationship between customer orientation, perceived service quality, inbound first call resolution and caller satisfaction. The fact of this matter is that whether in the contact center or any other industry it is good to note that the need to provide valid measures for the customer orientation programs should be seen not only in symbolic terms, but the very light of what the implementer is actually seeking to achieve (Yueh et al., 2010; Dean, 2007; Roland and Werner, 2005). For detailed information on customer orientation measurement items, attached is table 2 at the appendix for your perusal. Below is table 1 which aptly depicts the measurement items for customer orientation within the inbound call centers:

Given this evidence and many more empirical findings that have establish customer orientation as positively related to perceive service quality, inbound first call resolution and caller satisfaction (Dean, 2007; Roland and Werner, 2005; Yim et al., 2005; Feinberg et al., 2000), whereas probing and measuring the impact of this orientation have been suggested by researchers (McNally, 2007; Sin et al, 2005).

Therefore:

H1a: Customer Orientation of the inbound customer contact center is positively related to perceived service quality.

H2a: Customer Orientation of the inbound customer contact center is positively related to first call resolution.

H3a: Customer Orientation of the inbound customer contact center is positively related to caller Satisfaction.

Table 1: Customer Orientation Measurement Items and Constructs

Constructs	Items	Source
Customer Orientation	1. Customer is the center of strategic planning in the firm	Yueh et al (2010); Sin et al (2005); Yim et al (2005)
	2. The company is committed to meeting customer's needs and expectations	
	3. Customer database are frequently updated	
	4. There is frequent dissemination of customer information throughout the firm	

CRM Organization

CRM organization has been argued as an essential means through which fundamental changes in terms of how firms organized and conduct its business processes around employees and customers can be actualized (Wang et al., 2006; Sin et al., 2005; Yim et al., 2005). Implementing firms are encouraged to pay necessary attentions to the inherent organizational challenges in the CRM initiatives (Yueh et al., 2010; Rajshekhar et al., 2006; Adam and Michael, 2005). Both Wang et al (2006), Sin et al (2005) and Yim et al (2005) have all empirically tested and established that there exist a positive relationship between CRM organization and customer satisfaction, with serious emphasis on the positive roles of the employees. They argued further that the key considerations for any successful CRM to be implemented within the whole firm are organizational structures, the organization wide commitment of available resources, human resource management policies and employee job satisfaction that positively worked together to influence customer satisfaction (Wang et al., 2006; Sin et al., 2005., Yim et al., 2005). By organizational structure means that CRM applications requires that the entire strategic business units in such firms be design to jointly work together towards achieving a common goal in terms of building a strong

long-term customer relationships (Sin et al., 2005; Yim et al., 2005). For better efficiency of such organizational structure, it was advised that firms should incorporate productive process teams, cross discipline segment groups and customer focused departments (Aihie and Bennani, 2007; Sin et al., 2005; Yim et al., 2005). All the aforementioned structural designs are said to require a strong inter-functional coordination between the different departments, a statement that further confirms the existence of a positive relationship between CRM organization, employee job satisfaction and performance, perceived service quality and first call resolution (McNally, 2007; Rajshekhar et al., 2006).

Due to the high cost involvement of CRM applications, Sin et al (2005) and Yim et al (2005) conceptualized and established the importance of organization's wide commitment of resources to the intended design of CRM structures as having a positive relationship with employee satisfaction, performance and customer satisfaction. Also very important in their findings are the argument in favor of CRM organization as the established link between the human resources and the marketing interface (Yueh et al., 2010; McNally, 2007; Sin et al., 2005). Other literatures such as Dean (2007) and Roland and Werner (2005) have empirically established that there exist a positive relationship between CRM dimensions (specifically customer orientation), employee job satisfaction, perceived service quality; first call resolution and customer satisfactions. Dean (2007), Roland and Werner (2005), Sin et al (2005) and Yim et al (2005) all empirically argued that this is a stage where firms need to logically instill in its customer service representatives the utmost importance of the CRM dimensions in order to positively influence employee job satisfaction, perceived service quality, first call resolution, customer satisfaction and organization overall performance. In their concluding remarks they emphasized on four significant firms' internal marketing processes, which includes employee empowerment, effective internal communications, standard reward systems, and employee involvement as efficient means of actualizing CRM organizations on employee job satisfaction and performance (Yueh et al., 2010; Sin et al., 2005). Please refer to table 2 below for CRM organization measurement instruments:

In view of this, this research Hypothesize that:

H1b: CRM Organization of the inbound customer contact is positively related to perceived service quality.

H2b: CRM Organization of the inbound customer contact is positively related to first call resolution.

H3b: CRM Organization of the inbound customer contact is positively related caller Satisfaction.

Table 2: CRM Organization Measurement Items and Constructs

Constructs	Items	Source
CRM Organization	1. Our established and monitored customer centric performance standards at all customer touch-points	Yueh et al (2010); Sin et al (2005); Yim et al (2005)
	2. Our organization has resources and marketing expertise to succeed in CRM	
	3. Employee performance is measured and rewarded based on meeting customer needs and on successfully serving the customer.	
	4. Our organizational structure is meticulously designed around our customers	
	5. All employees in my organization understand and share the common goal of building and maintaining customer relationships	

Knowledge Management

Knowledge management as information strategy have been defined in different ways by different authors, but essentially it is a means with which companies capture, organize, manipulate, and share implicit and explicit data with both internal and external users (David and Wendy, 2009; Eid, 2007; Sin et al, 2005) . Whereas evidences from several literatures have indicated that the success or failure of relationship marketing activities in a company heavily depends on the company's ability to collect and analysis valuable customer information that could be used for developing and establishing individual customers' highly personalized product/services (Yueh et al., 2010; David and Wendy., 2009; Dean., 2007; Eid., 2007;). Yueh et al (2010) extensively argued that the current global marketing problems are as a result of information handling issues and problems. Authors such as Sin et al (2005) and David & Wendy (2009) are one of the few literatures that have strongly emphasized on the relationship between CRM and KM with specific point on customer knowledge management (KM) as having positive impact on employee job performance, perceived service quality and customer satisfaction

However, it is very important to clarify in this research that information should not in anyway be confused with

knowledge. An organization is said to possess Knowledge only when the available information has been analyzed and effectively used to implement appropriate strategic decisions and actions (Eid, 2007). In support of the aforementioned facts on CRM and KM literatures, David and Wendy, (2009) has argued that the confusion between CRM and KM has led many companies to commit high investments on ICT projects and programs which have resulted in a marginal results. And to overcome the observed ICT productivity problems, managers needs to put in place ICT-generated customer information into their organizational decision making processes (Yueh et al., 2010; Sin et al., 2005). According to Acedo et al (2006) and Meso and Smith (2000), these decision making processes involve three broad stages that run concurrently in the company: namely, Customer information acquisition, Customer information sharing and Customer information utilization. Therefore, collecting and creating insights, skills, and relationships are all termed "knowledge acquisition", and wherever these knowledge been disseminated and shared among the different strategic business unit in the company is termed "knowledge sharing" and lastly whenever there are integration of learning, customer's insights and experiential knowledge that are put together in support of effective decision making processes in the organization is called "knowledge utilization".

As previously discussed that Knowledge about key customers in a company is important for a successful CRM application (Yueh et al., 2010; Rajshekhar et al., 2006), because it could be use as a master plan to developing a learning relationship between the employees and company's current and potential customers (Nguyen et al., 2007) and thereby availing each organization the opportunity to a successful establishment of a stronger competitive strength in the market through employee job satisfaction, perceived service quality, first call resolution and customer satisfaction (Roland and Werner, 2005; Dean, 2004; Feinberg et al., 2000). It is premised on these arguments that both Sin et al (2005) and Yim et al (2005) have conceptualized and empirically established a positive relationship between employee knowledge acquisition and usage, and customer satisfaction.

Finally it is arguable that marketing is now more concerned with better means of responding to customer demand, with the general believes that actions taken in a prompt manner not only enhance service quality, but also foster positive long-term relationships with both employees and the customers (Yueh et al., 2010; Dean, 2007; Roland & Werner, 2005; Antonio et al., 2005; and Sin et al., 2005; Yim et al., 2005; Feinberg et al., 2000). Further information on the measurement instruments for knowledge management is provided in table 3 below:

Table 3: Knowledge Management Measurement Items and Constructs

Constructs	Items	Source
Knowledge Management	My organization's employees are willing to help customers in a responsive manner.	Yueh et al (2010); Sin et al (2005); Yim et al (2005)
	Customer can expect exactly when services will be performed	
	Customers can expect prompt service from employees of my organization.	
	My organization shares customer information across all points of contact	
	My organization believes that mining data intelligently is a source of competitive advantage	

The aforementioned theoretical arguments have led this study into hypothesizing the following Hypothesis:

H1c: Knowledge management of the inbound customer contact center is positively related to perceived service quality.

H2c: Knowledge management of the inbound customer contact center is positively related to first call resolution.

H3c: Knowledge management of the inbound customer contact center is positively related to caller Satisfaction.

Technology Based CRM

There are sufficient literatures in support of accurate customer data as an essential element to any successful CRM performance (McNally, 2007; Sin, et al., 2005; Yim et al., 2005) and, considering the fact that technology is said to be playing an important role in any CRM projects through its capacity to add value to a company's intelligence performance (Yueh et al., 2010; Kyootai and Kailas., 2007). The extant literatures have discussed the impact of Technology on CRM projects through its capability in collecting, storing, analyzing, and sharing both current and potential customers' information in ways that have greatly enhance employees' ability in responding to the needs and request of the individual customers and therefore leading to better ways of attracting and retaining customers (Yueh et al., 2010;

David and Wendy., 2009; Kyootai and Kailas., 2007; Nguyen et al, 2007; Sin, et al., 2005).

The unprecedented advances in information technologies has assisted in improving the promise on customer value analysis through mass customization via CRM integrated approaches, such as web enabled approach, automation of marketing and customer support processes, customer information systems, and contact centers (McNally, 2007; Dean, 2007; Wang et al., 2006; Yim et al., 2005). The advent of CRM has assisted the establishment of information intensive strategies which encompasses computer technologies in building and retaining long term relationships, by leveraging the existing technology and strategically linking technology deployment to alternative targeted strategic business units (Sin et al, 2005). It is worth mentioning here that the invention of technology in relationship management has to a great level assisted employees in all contact points to serve customers better, a strong indication that without technology, many customer centric programs would be impossible (David and Wendy., 2009; Kyootai and Kailas., 2007; and Sin et al., 2005).

Many of the existing literatures have argued in support of the positive impact that the initiation, development and implementations of CRM technology within an organization has on perceived service quality, first call resolution, caller satisfaction and maintaining long-term customer relationships (McNally, 2007; Wang et al., 2006; Sin et al., 2005; Ravipa and Mark, 2004; Fox and Stead, 2001; Berry, 1995). Notably, this study identified that it is widely possible for researchers to determine if an organization has in place CRM technology or not, but measuring the effectiveness of its utilization in terms of user acceptance, and the desired operational performance have since been neglected and this has been confirmed as very vital to the implementing firm (Sin et al., 2005; Ravipa and Mark, 2004). The existing academic and practitioner literatures on CRM are mostly in the areas of customer database, contact centers, online chatting systems, e-mails, Internets and some organizational group support systems (McNally, 2007; Nguyen et al, 2007; Adam and Michael, 2005; James, 2004).

Given the existing theoretical evidences that established CRM as a special application in Relationship Marketing, Sin et al (2005) proposed, tested and empirically established a positive linkage between Technology based CRM and organization performance (Sin et al, 2005; Yim et al., 2005). Detailed information on the measurement items for technology based CRM is provided below in table 4, next to it is the hypothesized relationships:

Table 4: Technology Based CRM Measurement Items and Constructs

Constructs	Items	Source
Technology Based CRM	1. Our firm has the right technical staffs to provide the required technical supports for the utilization of modern computer technology in building long term customer relationships.	Yueh et al (2010); Sin et al (2005); Yim et al (2005)
	2. Through CRM technology, our firm provides individual customer information is available at every point of customer contact.	
	3. My organization maintains a comprehensive database of our customers.	
	4. Our computer technology can help create customized offerings to our customers	
	5. In our firm, IT has been facilitating the management of customer relationships	

H1d: Technology based CRM of the inbound customer contact center is positively related to perceived service quality.

H2d: Technology based CRM of the inbound customer contact center is positively related to first call resolution.

H3d: Technology based CRM of the inbound customer contact center is positively related to caller Satisfaction.

First Call Resolution

Sequel to the series of literatures that have argued against the efficiency of the current quantitative measures in determining contact centers operational performances (Levin 2007a&b; Eric et al., 2006; Kode et al., 2001), academic scholars such as Feinberg et al (2002; 2000) has made a case for first call resolution (FCR). FCR has been defined as the percentage of the calls that does not requires any further contacts or callbacks to address the same customer's reason for previously calling. Also in support of FCR arguments are that it ought to be defined from the customer perspectives, which any attempt by firms to calculate such will amount to an incorrect estimates (Stephen and Michael, 2008; Timothy et al, 2006). Their primary view is that there is need for a greater effort to evaluate whatever that will satisfy the customers' needs.

Some literatures have equally criticized the industry standard that target 80 per cent of incoming calls to be answered within 20 seconds, as being very hollow in terms of achieving best call qualities that will meet the customer's expectations (Dean, 2009; 2007, Eid, 2007; Roland and Werner, 2005). Their arguments are premised on the fact in measuring how well of a call, as against the existing industry structures that involves measuring fastness of a call. Levin (2007a&b) equally support that FCR is by far the contact center variable that is having the biggest of impact on inbound caller satisfaction. Integrating his analysis from the findings of Service Quality Measurement consulting group (SQM), Levin (2007a) empirically argued that the inbound caller satisfaction will drop at an average of 15% for all the callback that a customer makes to any contact center. In that same SQM's finding, it was estimated that for every 1% improvement that any contact center achieves in FCR, they will get a 1% improvement in their caller satisfaction (Levin, 2007a). Also relevant in the findings to establish the importance of FCR is a study of 150 contact centers by SQM, where they have found that the world class contact center with a high customer satisfaction ratings have an average FCR of about 86% (Stephen and Michael, 2007). SQM findings also indicated that the contact centers with lower customer satisfaction index are always within the lowest range of FCR (Stephen and Michael, 2007).

In Levin (2007b), he empirically establish that any contact center that achieved an increased customer satisfaction will likely experience a lower cost of operation, reduction in repeat callers, reduction in risk of existing customers defecting to the competitors, and finally achieving a higher employee job satisfactions. The premise of this argument is that if contact centers are facing increased repeat calls from a group of frustrated customers, that it will definitely strains the customer service representatives and invariably leading to a lower employee morale, poor customer service outputs and subsequently leading to higher customer service representative turnovers (Abdullateef et al., 2010).

Some authors have depicts the benefits that are inherent in the real time customers surveys as an effective means of capturing the required information that firms need in combating the cause of the customers repeat calls (Feinberg et al., 2002). Further explanation was given in support of an open ended type of survey where opportunity can be given to the callers to provide detail descriptions of the actual problem they are facing. This is because those literatures believed that the proposed qualitative information will add the needed explanations to the available dramatic quantitative information about customer problems (Levin, 2007a&b; Feinberg et al.,

2000). As revealed that many contact centers have been employing different technology and manual applications to assist them in answering their FCR rate question, but none of this technology have been established to have the capacity in accurately answer the question in a better way than the customers themselves (Abdullateef et al., 2010; Stephen and Michael, 2007). That firm's process of reviewing their phone records and trying to run software applications are nothing rather than beating around the bush (Stephen and Michael, 2007).

Finally, since first call resolution has been established as a popular KPI, it is arguable to ensure that its application is properly benchmarked within the contact center industry (Stephen and Michael, 2007; Levin, 2007a&b; Feinberg et al., 2002; 2000). Based on available evidence from call center literatures, this study has based the measurements of performance variables such as first call resolution and caller satisfaction within the inbound call centers by asking managers to rate their company's performance based on the percentage of their callers surveyed that report top box first call resolution (FCR) and caller satisfaction (Yim et al., 2005; Feinberg et al., 2002; 2000).

Conclusively, this research proposed that:

H4: First Call Resolution of the inbound customer contact center is positively related to Caller Satisfaction.

Perceived Service Quality

A lot of empirical studies have shown compelling evidence that there is a direct relationship between service quality and customer satisfaction and loyalty (Dean, 2007; Teas, 1993a&b; Zeithaml et al., 1985). According to Dean (2007), Perceived service quality is customers' assessments of the overall superiority of the services provided by the firm, with specific reference to the service interactions and outcomes. In the synthesis of other previous work, Dean (2007) quoted Brady and Cronin (2001) as establishing three dimensions of overall service quality, which are interactions, outcomes, and environmental quality. Given the telephony nature of this research, we are excluding the physical environment. The extant literatures have established managers and agents' relationship as interaction quality, while the outcome dimension was related to caller's first call resolution.

Customer perceived service quality is a broader marketing concept because it includes consideration of various service attributes, ranging from any of the below as stated by Mohr (1997).

(1) Future expectations;

(2) Value: quality/price;

(3) Excitement, surprise, and delight;

(4) Fast response;

(5) Delivery of solutions; and

(6) Consistency: defect and error-free (Mohr, 1997).

Following the arguments in support of the above evidences, this research propose that the contact center customers can evaluate (be satisfied/ dissatisfied) with contact center service delivery only after they could interpret (perceive) the services. This is because this proposition is applicable to the transaction specific as well as the global perspectives, a strong reason upon which Dean (2007) empirically tested the mediating impact of perceived service quality between customer orientation and customer loyalty. More specifically to the customer contact centers, this research propose that the customers may perceive contact center service quality immediately after the service delivery as well as in a later time and compare their initial perceptions with their individual predictive expectations. Consequently the perceived service quality, customers' expectations, and the disconfirmation would then result in caller's first call resolution and satisfactions/dissatisfactions. Below is table 5 that consist of 4 measurement items for perceived service quality as adapted from Dean (2007; 2002):

Table 5: Perceived Service Quality Measurement Items and Constructs

Constructs	Items	Source
Perceived Service Quality	1. My organization makes sure that customers doesn't wait too long in a queue for service	Dean (2007; 2002)
	2. My organization customer service consultant are taking enough time to attend to customers and not rushing the customers	
	3. My organization customer service consultant are treating the customers with empathy	
	4. My organization customer service consultant are having the authority to solve customers' problem	

Similarly Dean (2007) empirically shown that perceived service quality of the contact centers positively mediates the link between the customer orientation and caller satisfactions. Part of the recommendations that was given by Dean is that caller satisfaction ought to be separately

measured from the service quality performance so that the organization could be availed with the opportunity of better understanding customers' perceptions of its technology implementations and service quality performance (Dean, 2007; 2004).

Based on the above and many other supporting arguments in the extant literatures, this research hypothesizes that:

H5: Perceived service quality of the inbound customer contact center is positively related to caller satisfaction.

Conclusion, limitations and directions for future research

A critical analyzes of the aforementioned have shown that despite the increasing acknowledgements of the positive impacts of CRM, it is disappointing that very little studies still focus on measuring the impacts of CRM dimensions on customer contact center performances (Yueh et al., 2010; McNally, 2007; Soon, 2007; Bang, 2006; Yim et al., 2005). In support of the above emphasis are ample of evidences provided by several sources on severe employee job dissatisfactions and customer dissatisfactions with contact centre systems and services across the globe (Callcentre.net, 2008; 2003; SQM, 2007; Feinberg et al., 2002; 2000; Miciak and Desmarais 2001), and that the major problems are stemming from factors such as lack of established customer orientation, CRM organization, knowledge management, and technology based CRM (Abdullateef et al., 2010; Yueh et al., 2010; McNally, 2007; SQM, 2007; Wang et al., 2006; Bang, 2006; Sin et al., 2005; Yim et al., 2005).

A major contribution by this research is that only few studies have investigated the impact of one or two out of the four (4) dimensions of CRM on caller satisfaction, but observably this is the first study that first proposed a complete framework that captures the impact of CRM dimensions on caller satisfaction within the inbound contact center industry. The findings in this study indicate that there is strong reason to modifying the existing CRM implementations and organization's performance measurements within the contact center industry. More importantly in areas such as measuring perceived service quality, first call resolution, customer satisfactions and dissatisfactions.

Beyond these findings is a main limitation in the qualitative approach that was applied in this research, constraining it from the ability to generalize its findings and recommendations to all industries and countries. Importantly, suggestions from this research are not quantitatively backed by empirical data and appropriate statistical analysis that could validate the proposed

theoretical linkages that exist between CRM dimensions, perceived service quality, first call resolution and caller satisfaction, thereby further limiting its diagnostic power of predictions. To rectify these limitations, this study suggests there is need for future study to embark on empirical data gathering to validate the proposed model. However, as could be noted that this research has conducted a detailed literature review to establish the positive relationships that exist between CRM dimensions perceived service quality, first call resolution and caller satisfaction, it is important for future researchers to conceptualize and if possible determine other constructs for measuring caller satisfaction within the contact centers, specifically the inbound call centers.

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Aliyu Olayemi Abdullateef
(Graduate Teaching Assistant) PhD
Research Candidate (UUM), MSc
Economics (IIUM), PGD Financial
Mgt (AAU), HND Marketing, ND
Bus Studies (Fedpoffa), Expertise:
Marketing, CRM, Technology
Management and Financial
Economics



Sany Sanuri Mohd Mokhtar
(Senior Lecturer) PhD, MBA
(UUM), B.A (Hons) Business Studies
(University of Huddersfield, UK)
Expertise: Marketing and Quality
Management



Rushami Zien Yusoff (Professor)
PhD (Bradford), M.B.A. (Western
Illinois), B.B.A. (Western Illinois),
ADBA (UiTM) Expertise: Quality
Management, Strategic Management,
Service Marketing, Technology
Management